

What is claimed is:

1. A system for processing a substrate with a processing liquid, said system comprising:

a case carrying unit for carrying in/out a case accommodating therein said substrate;

a liquid-processing unit for supplying said processing liquid to process said substrate with said processing liquid;

a substrate conveying unit for conveying said substrate between said case carrying unit and said liquid-processing unit;

a processing liquid storing unit for storing said processing liquid, feeding said processing liquid to said liquid-processing unit and recovering said processing liquid from said liquid-processing unit; and

a plurality of frames each supporting one or more of said case carrying unit, said liquid-processing unit, said substrate conveying unit and said processing liquid storing unit,

wherein at least two of said plurality of frames are capable of being connected to and separated from each other.

2. The system as set forth in claim 1, wherein said substrate conveying unit has a ceiling having lower and higher portions, each of said lower and higher portions being provided with a blower mechanism, and air supplied from said blower mechanism being exhausted from the bottom of said substrate conveying unit.

3. The system as set forth in claim 1, wherein said substrate conveying unit has a substrate conveying mechanism comprising:

a first conveying arm for conveying an unprocessed substrate;

a second conveying arm for conveying a processed substrate;

a first sliding mechanism for causing said first conveying arm to access a position for transferring said substrate;

a second sliding mechanism for causing said second conveying arm to access a position for transferring said substrate;

a table for supporting thereon said first sliding mechanism and said second sliding mechanism;

a rotating mechanism for rotating said table;

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a lifting mechanism for vertically moving said table together with said rotating mechanism; and

a horizontal moving mechanism for sliding said lifting mechanism to a predetermined position.

4. A system for processing a substrate with a processing liquid, said system comprising:

a case carrying unit for carrying in/out a case accommodating therein said substrate;

a liquid-processing unit for supplying said processing liquid to process said substrate with said processing liquid;

a substrate conveying unit for conveying said substrate between said case carrying unit and said liquid-processing unit;

a processing liquid storing unit for storing said processing liquid, feeding said processing liquid to said liquid-processing unit and recovering said processing liquid from said liquid-processing unit; and

a plurality of controllers for controlling said liquid-processing unit, said substrate conveying unit and said processing liquid storing unit,

wherein each of said controllers is constructed as a boxed unit, and is arranged in an upper portion of said substrate conveying unit or said processing liquid storing unit.

5. The system as set forth in claim 4, further comprising:

a first frame integrally constituting a framework of said case carrying unit and said substrate conveying unit;

a second frame integrally constituting a framework of said liquid-processing unit; and

a third frame integrally constituting a framework of said processing liquid storing unit,

wherein said first and third frames are detachably connected to said second frame.

6. The system as set forth in claim 5, wherein said controller for controlling said liquid-processing unit, and said controller for controlling said processing liquid storing unit are mounted on said

second frame, and

said controller for controlling said substrate conveying unit is mounted on said first frame.

7. The system as set forth in claim 4, wherein said substrate conveying unit has a ceiling having lower and higher portions, each of said lower and higher portions being provided with a blower mechanism, and air supplied from said blower mechanism being exhausted from the bottom of said substrate conveying unit.

8. The system as set forth in claim 4, wherein said substrate conveying unit has a substrate conveying mechanism comprising:

- a first conveying arm for conveying an unprocessed substrate;
- a second conveying arm for conveying a processed substrate;
- a first sliding mechanism for causing said first conveying arm to access a position for transferring said substrate;
- a second sliding mechanism for causing said second conveying arm to access a position for transferring said substrate;
- a table for supporting thereon said first sliding mechanism and said second sliding mechanism;
- a rotating mechanism for rotating said table;
- a lifting mechanism for vertically moving said table together with said rotating mechanism; and
- a horizontal moving mechanism for sliding said lifting mechanism to a predetermined position.

9. A system for processing a substrate with a processing liquid, said system comprising:

- a case carrying unit for carrying in/out a case accommodating therein said substrate;
- a liquid-processing unit for supplying said processing liquid to process said substrate with said processing liquid;
- a substrate conveying unit for conveying said substrate between said case carrying unit and said liquid-processing unit;
- a processing liquid storing unit for storing said processing liquid, feeding said processing liquid to said liquid-processing unit and recovering said processing liquid from said liquid-processing unit;

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a plurality of controllers for controlling said liquid-processing unit, said substrate conveying unit and said processing liquid storing unit;

a power supply unit for said plurality of controllers; and

an exhaust system for collecting air exhausted from said plurality of controllers and air exhausted from said power supply unit, in one place, and exhausting air out of said system.

10. The system as set forth in claim 9, wherein said plurality of controllers, said power supply unit and said exhaust system are provided in upper portions of said substrate conveying unit, said liquid-processing unit and said processing liquid storing unit.

11. The system as set forth in claim 9, wherein said substrate conveying unit has a ceiling having lower and higher portions, each of said lower and higher portions being provided with a blower mechanism, and air supplied from said blower mechanism being exhausted from the bottom of said substrate conveying unit.

12. The system as set forth in claim 9, wherein said substrate conveying unit has a substrate conveying mechanism comprising:

a first conveying arm for conveying an unprocessed substrate;

a second conveying arm for conveying a processed substrate;

a first sliding mechanism for causing said first conveying arm to access a position for transferring said substrate;

a second sliding mechanism for causing said second conveying arm to access a position for transferring said substrate;

a table for supporting thereon said first sliding mechanism and said second sliding mechanism;

a rotating mechanism for rotating said table;

a lifting mechanism for vertically moving said table together with said rotating mechanism; and

a horizontal moving mechanism for sliding said lifting mechanism to a predetermined position.

13. A system for processing a substrate with a processing liquid, said system comprising:



is retracted from said outer processing vessel.

17. A system for processing a substrate with a processing liquid, said system comprising:

a substrate transfer chamber provided with a holder formed so as to hold a substrate, said substrate being transferred between said holder and an outside of said substrate transfer chamber;

a blower mechanism provided in a ceiling portion of said substrate transfer chamber;

a processing-vessel chamber provided with a processing vessel, said substrate held by said holder being carried into said processing vessel and said processing liquid being supplied to said substrate in said vessel to process said substrate with said processing liquid; and

a utility chamber provided with a liquid feeding mechanism for feeding said processing liquid to said processing vessel, and a processing liquid recovering mechanism for recovering said processing liquid fed to said processing vessel,

wherein air supplied from said blower mechanism to said substrate transfer chamber is exhausted from said substrate transfer chamber via said processing-vessel chamber or said utility chamber.

18. The system as set forth in claim 17, wherein said processing vessel has an opening for allowing said holder to pass therethrough, and

wherein a lid capable of closing said opening of said processing vessel and a rotating mechanism for rotating said holder are integrally formed with said holder.

19. The system as set forth in claim 17, wherein said substrate transfer chamber has:

an attitude converting mechanism for converting the attitude of said holder such that a principal plane of said substrate held by said holder is set substantially horizontally or vertically;

a lifting mechanism for vertically moving said holder and said attitude converting mechanism; and

a horizontal moving mechanism for moving said holder, said attitude converting mechanism and said lifting mechanism in horizontal directions.

20. The system as set forth in claim 17, wherein said processing vessel has:

an outer processing vessel fixed in said processing-vessel chamber; and

an inner processing vessel slidable between a processing position at which said inner processing vessel is housed in said outer processing vessel, and a retracted position at which said inner processing vessel is retracted from said outer processing vessel.

21. A system for processing a substrate with a processing liquid, said system comprising:

a case carrying unit for carrying in/out a case accommodating therein said substrate;

a liquid-processing unit for supplying said processing liquid to process said substrate with said processing liquid; and

a substrate conveying unit for conveying said substrate between said case carrying unit and said liquid-processing unit,

said liquid-processing unit comprising:

a substrate transfer chamber provided with a holder formed so as to hold a substrate, said substrate being transferred between said holder and said substrate conveying unit;

a blower mechanism provided in a ceiling portion of said substrate transfer chamber;

a processing-vessel chamber provided with a processing vessel, said substrate held by said holder being carried into said processing vessel and said processing liquid being supplied to said substrate in said vessel to process said substrate with said processing liquid; and

a utility chamber provided with a liquid feeding mechanism for feeding said processing liquid to said processing vessel, and a processing liquid recovering mechanism for recovering said processing liquid fed to said processing vessel,

wherein air supplied from said blower mechanism to said substrate transfer chamber is exhausted from said substrate transfer chamber via said processing-vessel chamber or said utility chamber.

22. The system as set forth in claim 21, wherein said processing vessel

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has an opening for allowing said holder to pass therethrough, and wherein a lid capable of closing said opening of said processing vessel and a rotating mechanism for rotating said holder are integrally formed with said holder.

23. The system as set forth in claim 21, wherein said substrate transfer chamber has:

an attitude converting mechanism for converting the attitude of said holder such that a principal plane of said substrate held by said holder is set substantially horizontally or vertically;

a lifting mechanism for vertically moving said holder and said attitude converting mechanism; and

a horizontal moving mechanism for moving said holder, said attitude converting mechanism and said lifting mechanism in horizontal directions.

24. The system as set forth in claim 21, wherein said processing vessel has:

an outer processing vessel fixed in said processing-vessel chamber; and

an inner processing vessel slidable between a processing position at which said inner processing vessel is housed in said outer processing vessel, and a retracted position at which said inner processing vessel is retracted from said outer processing vessel.

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